



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,774	09/16/2003	David Richard Corbin	CL1834USNA	4796

23906 7590 03/18/2005

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

SAMPLE, DAVID R

ART UNIT	PAPER NUMBER
----------	--------------

1755

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/664,774	CORBIN ET AL.	
	Examiner	Art Unit	
	David Sample	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 4, 8-11, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20040610</u> . | 6) <input type="checkbox"/> Other: _____ |

2e

DETAILED ACTION

Claim Rejections - 35 USC §§ 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-7, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Siklosi et al. (WO 99/21797).

Siklosi et al. discloses a method of making zeolite A in which a material containing sources of alkali, silicon and aluminum is treated to destroy the crystallinity, purified, and separated from the treatment solution to form an amorphous aluminohydrosilicate. See page 3, lines 23-28. This corresponds to steps 'a' and 'b' of claim 1. The amorphous hydrosilicate is re-suspended in water that contains alkali. See page 3, lines 28-30. Optionally, further silica and alumina are added. Id. This zeolite slurry may be treated by adding zeolite nuclei (i.e., seeds). See page 4, lines 1-2. Lastly the reaction mixture is crystallized. See page 4, lines 2-3.

The reference discloses that the aluminohydrosilicate to be treated has the composition sufficient to form zeolite A. See Example 2, pages 13-14. Example 1 shows forming zeolite A from a reaction mixture containing zeolite A nuclei. See pages 12-13.

The recitations of instant claim 5 can be found in the reference at page 6, lines 5-8.

The recitations of instant claims 6 and 7 can be found in the reference at page 14, line 6.

The reference fails to disclose the particle size of the resultant zeolite A. However, the process of Siklosi et al. performs identical steps in an identical manner. Accordingly, the zeolite A of Siklosi et al. is presumed to inherently possess a size of less than 100 nm (i.e., they are nano-sized as the term is defined by applicants at page 5, lines 7 and 8). See MPEP 2112.

Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over each of (1) Zhu et al. ("Synthesis and Characterization of High-Quality Zeolite LTA and FAU Single Nanocrystals," *Chem. Mater.*, 1998, vol. 10, pages 1483-1486); and (2) Otterstedt et al. (US Patent No. 5,863,516).¹

Claims 16 and 17 define the product by how the product was made. Thus, the claims are product-by-process claims. For purposes of examination, product-by-process claims are not limited to the manipulation of the recited steps, only the structure implied by the steps. See MPEP 2113. In the present case, the recited steps imply a structure of a zeolite A having a size of less than 100 nm. As will be described below, the references disclose such products.

Zhu et al. discloses zeolite A crystals having a particle size of 50-130 nm. See Table 1, page 184, runs 12 and 13. A portion of these crystals is necessarily less than 100 nm.

Otterstedt et al. discloses zeolite A crystals having a size of less than 100nm. See col. 8, lines 57, col. 9, lines 48-51, col. 10, lines 29-31, 48-51.

¹ 102/103 rejections have been approved by the courts in the context of product-by-process claims. See MPEP 2113.

Allowable Subject Matter

Claims 12 and 13 are allowed. The prior art fails to disclose each of the process steps recited in the claims in combination with the further step d.

Claims 4, 8-11, 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to disclose each of the process steps recited in claim 1 in combination with the further recitations of instant claims 4, 8-11, 14 and 15.

Conclusion

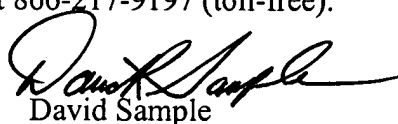
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (571)272-1376. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (572)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1755

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "David Sample", is positioned above the printed name.

David Sample
Primary Examiner
Art Unit 1755